Movement Tracking System (MTS)

Movement Tracking System

SPEARHEAD OF LOGISTICS

Terminal Learning Objective

ACTION: Demonstrate basic familiarity with the Movement Tracking System, including its capabilities, functions, and operational concepts.

MTS Outline

- Historical perspective
- MTS overview
- System capabilities and functions
- Operational concept
- Hardware description
- MTS units and vehicles
- Summary

Lesson Learned

Inability to track, reroute, and otherwise communicate with TWV leads to:

- Inefficient asset utilization
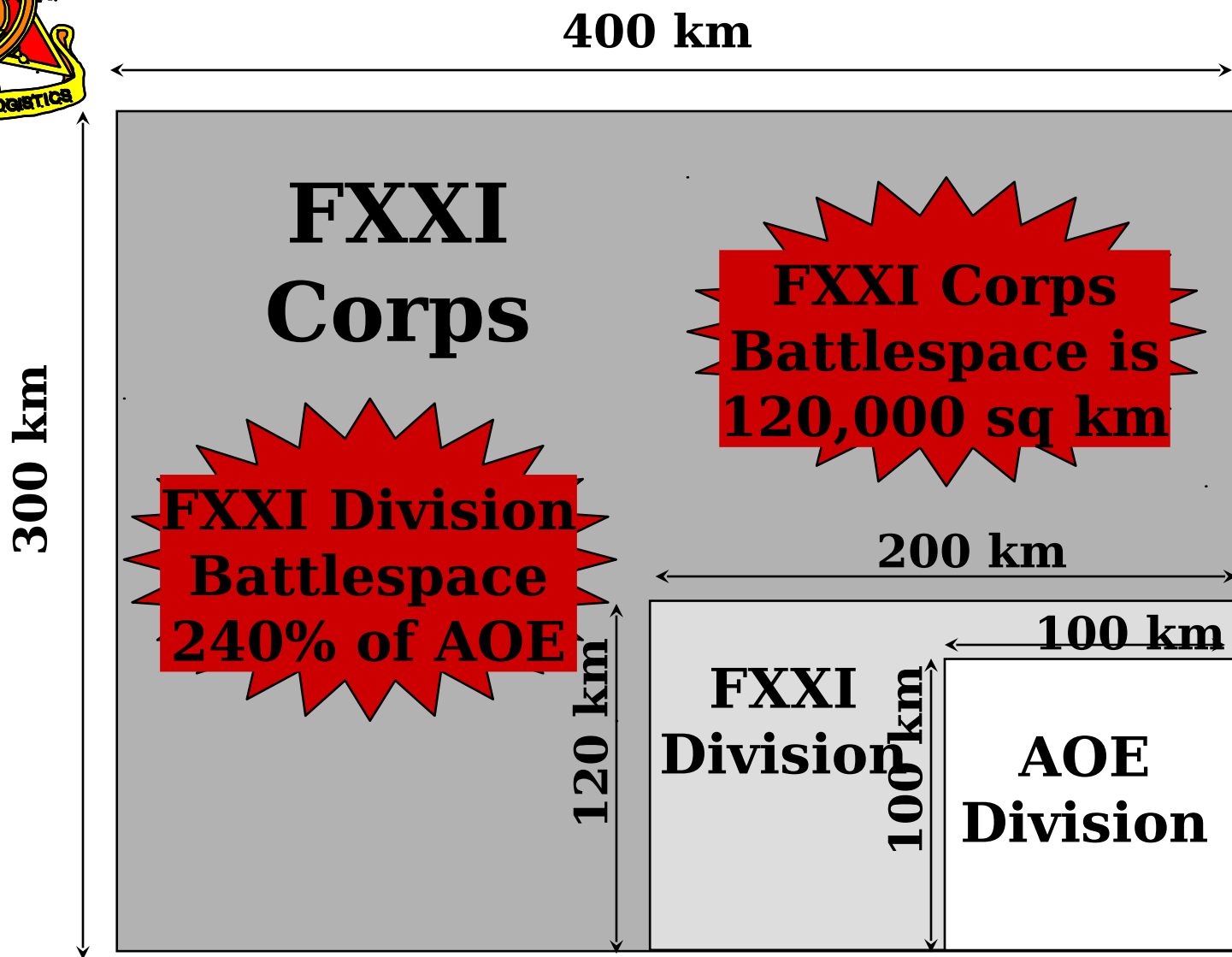- Increased personnel and equipment risk
- Misdirection of cargo

Characteristics of Force XXI Operations

- Rapid force projection
- Extended lines of communication (LOC)
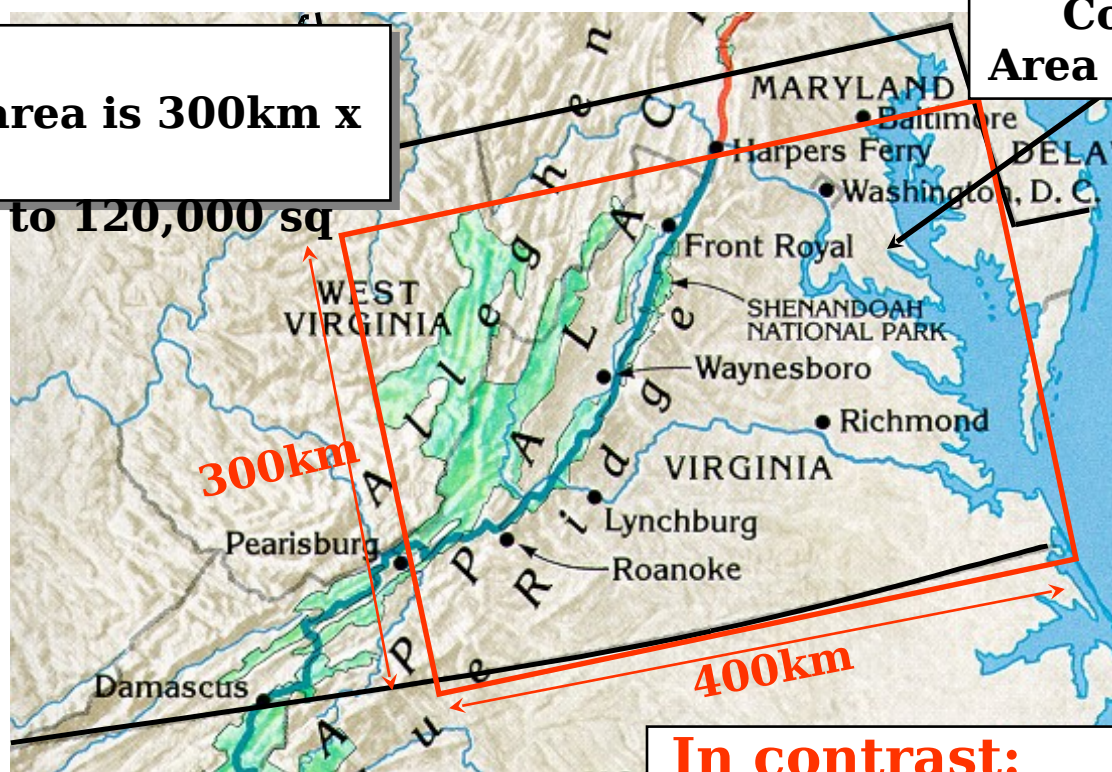- Logistically bare-based areas

The Expanding Battlefield

400 km

300 km

FXXI Corps

FXXI Corps Battlespace is 120,000 sq km

FXXI Division Battlespace 240% of AOE

200 km

120 km

100 km

FXXI Division

100 km

AOE Division

Covering the Map

FXXI:
Corps XXI's area is 300km x 400km
This equates to 120,000 sq km

Corps XXI's Area of Operation

300km

400km

In contrast: Virginia's size is only 105,586 sq km

7

Illustrative Road Distances
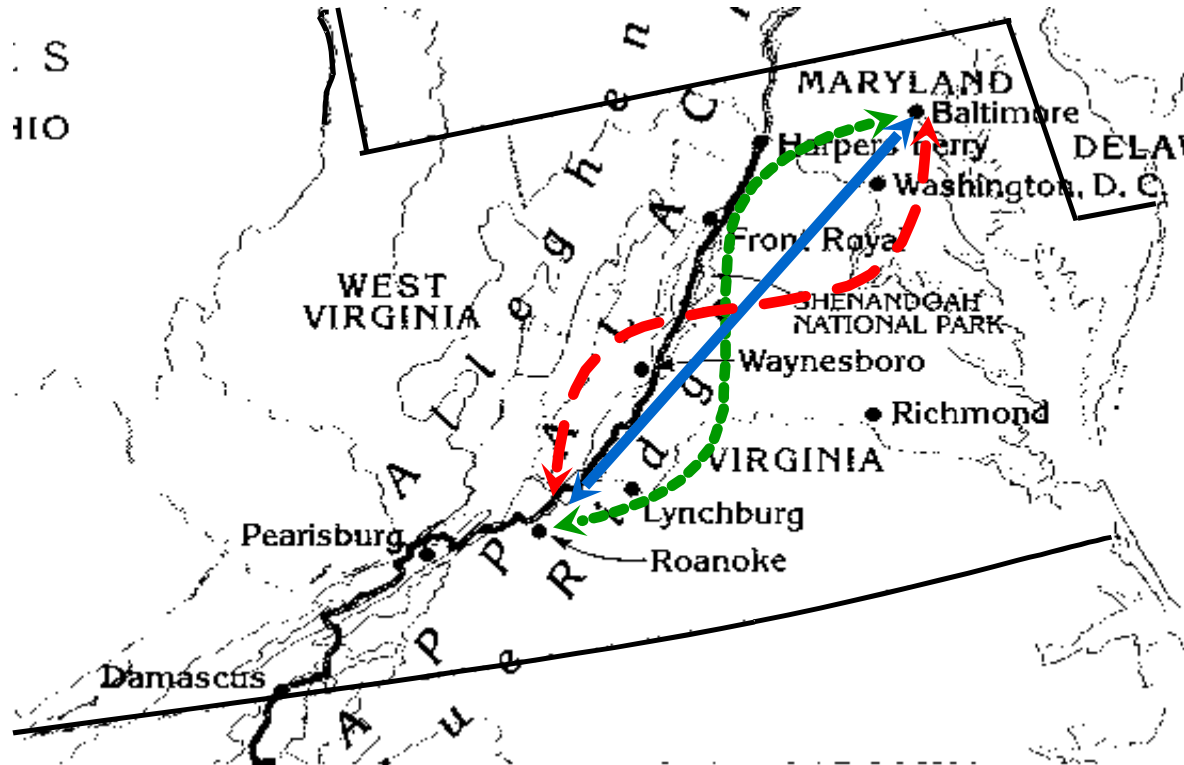
Distance:

Straight Line — 370 km

Interstate (40 km/hr) — 483 km — 12 hrs

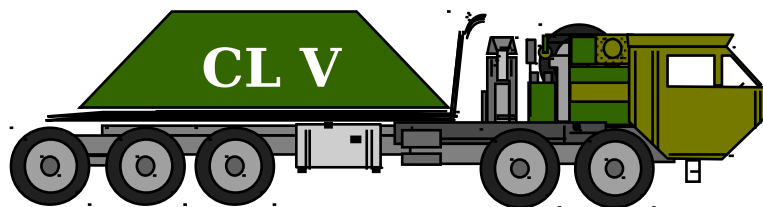**Secondary Rd (25 km/hr)** — 579 km — 23 hrs

How do we…?

Go from this …

Flat tire. Now we will be 30 minutes late. Hope those guys can hold out.

We are under fire! Need help NOW!!! …. Must be out of radio range

CL V

Most trucks do not even have radios

To a system that provides….

Positive Control

- Force Protection
- Total Asset Visibility
  & Intransit Visibility

This situation is made worse with the increased battlespace of Force XXI

9.

MTS Overview

Requirement

The Army needs a capability to track the location of vehicles, communicate with vehicle operators, and redirect movements based on battlefield requirements.

MTS ORD

14 Sep 98

Required Capabilities

- Military and civilian GPS
- Two-way messaging
- Landline-independent
- Satellite-based tracking and communication system
- Worldwide coverage
- Capability to interface with STAMIS

Desired Capabilities

- Enhanced signal security
- Capability to use multiple satellites
- Interface with FBCB2
- Vehicle diagnostics/prognostics

10

MTS Mission

Provide CSS Commanders with near real-time transportation asset location, movement data, and situational awareness.

Enable logisticians to redirect supplies, identify/avoid hazards, inform drivers of unit location changes, and improve the efficiency of the distribution system.

MTS Capabilities

- Military and civilian GPS
- Two-way messaging
- Satellite-based tracking and communication system
- Landline-independent
- World-wide coverage
- Capability to interface with STAMIS

MTS is a STAMIS

- STAMIS for movement tracking
- Used in:
  - peacetime
  - operations other than war (OOTW)
  - wartime
- Used by:
  - vehicle operators
  - control station operators
  - unit command personnel

MTS Configurations

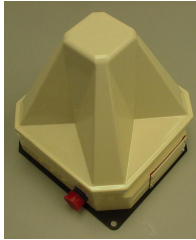**Control Station (in the TOC)**

Mobile Unit

Leased / Host Nation Vehicle

'V2" Truck

14

Control Station

	MT 2010 Transceiver
	Laptop Computer
	HP340 portable inkjet printer
	Accessories • Transit case • Port expander • Control box

V1 Hardware
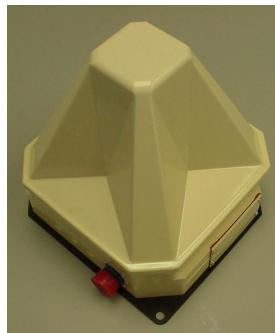
	MT 2010 Transceiver
	HP Jornada 680
	Accessories • Transit case • Cabling • PLGR adapter

Quick and Easy Mounting

Transceiver mounts
to back or top of cab

Transceiver
Magnet
Mount

Palmtop
mounted inside
cab

Velcro for
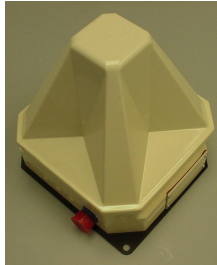fast
placement
and removal

Adapter is included to
operate the V1
equipment from vehicle
power

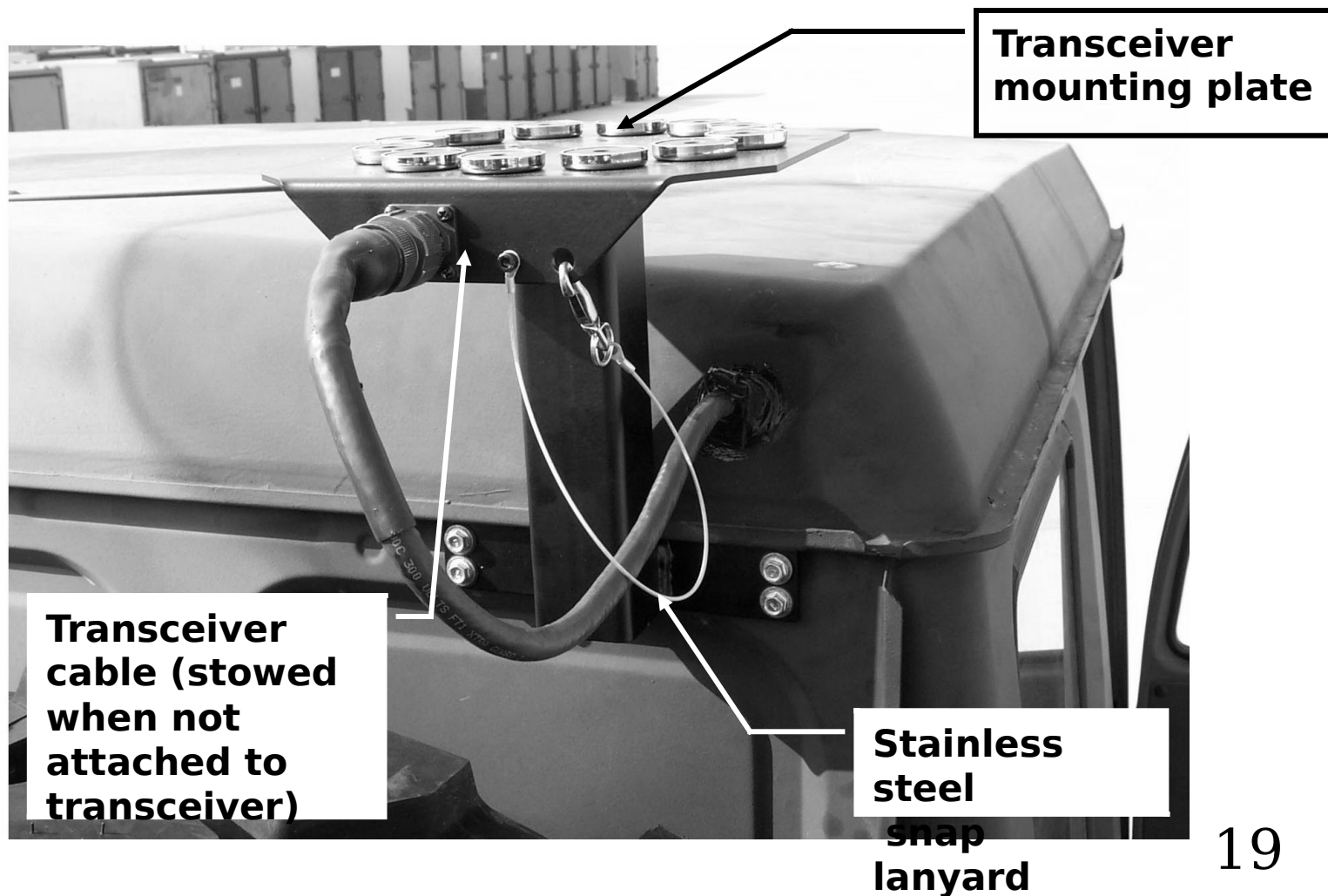**Simple and fast installations in under 10 minutes**

17

V2 Hardware

	MT 2010 Transceiver
	HHC-133 Ruggedized Computer
	Accessories • Transit case • Cabling • PLGR adapter

18

External A-Kit

Transceiver mounting plate

Transceiver cable (stowed when not attached to transceiver)

Stainless steel snap lanyard

19

In-cab Equipment
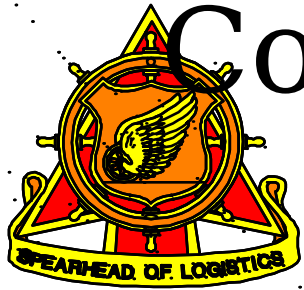

Combined Control and Junction Box in HMMWV

Separate Control and Junction Boxes in FMTV

V2 Keyboard Configuration
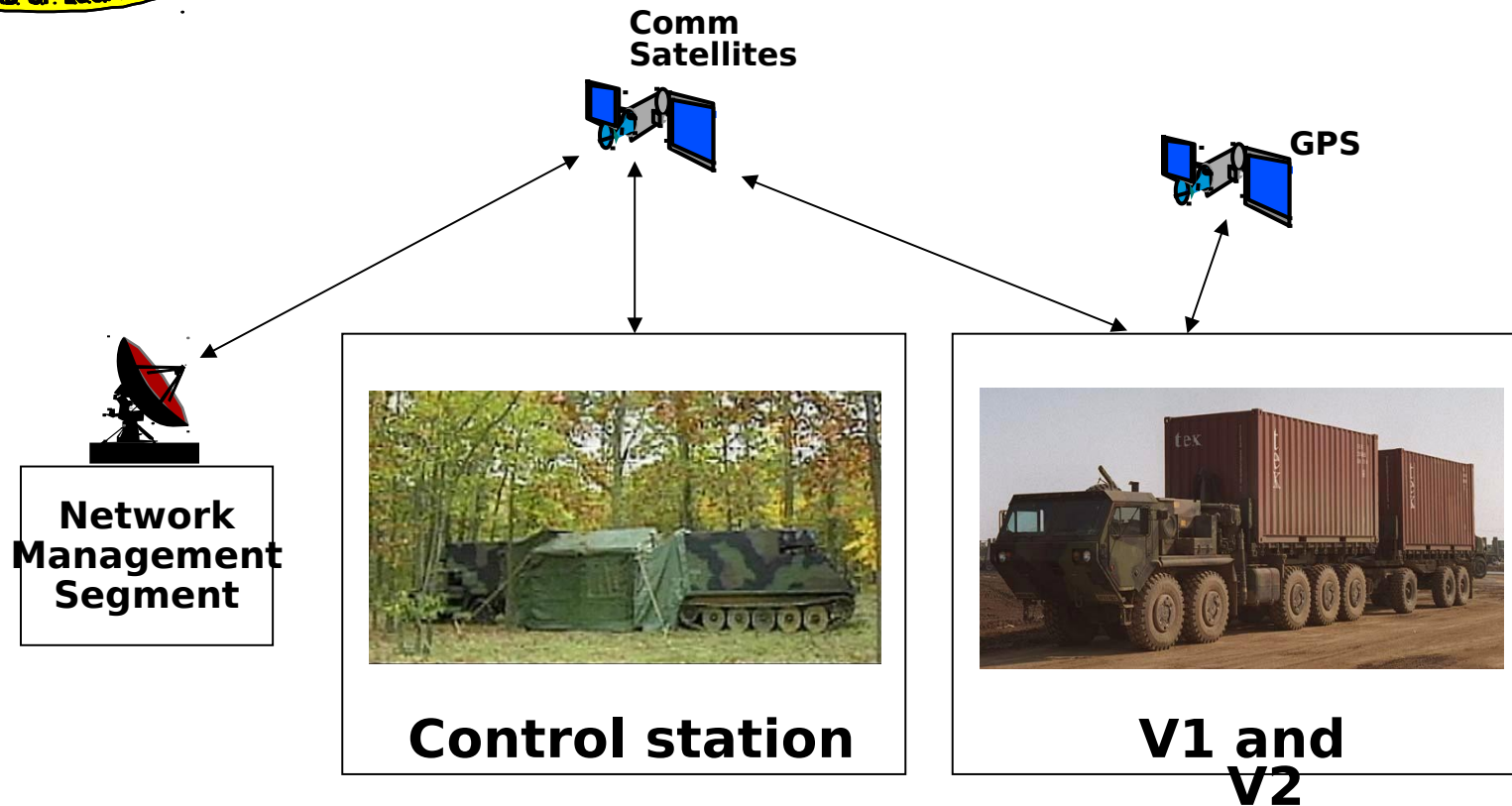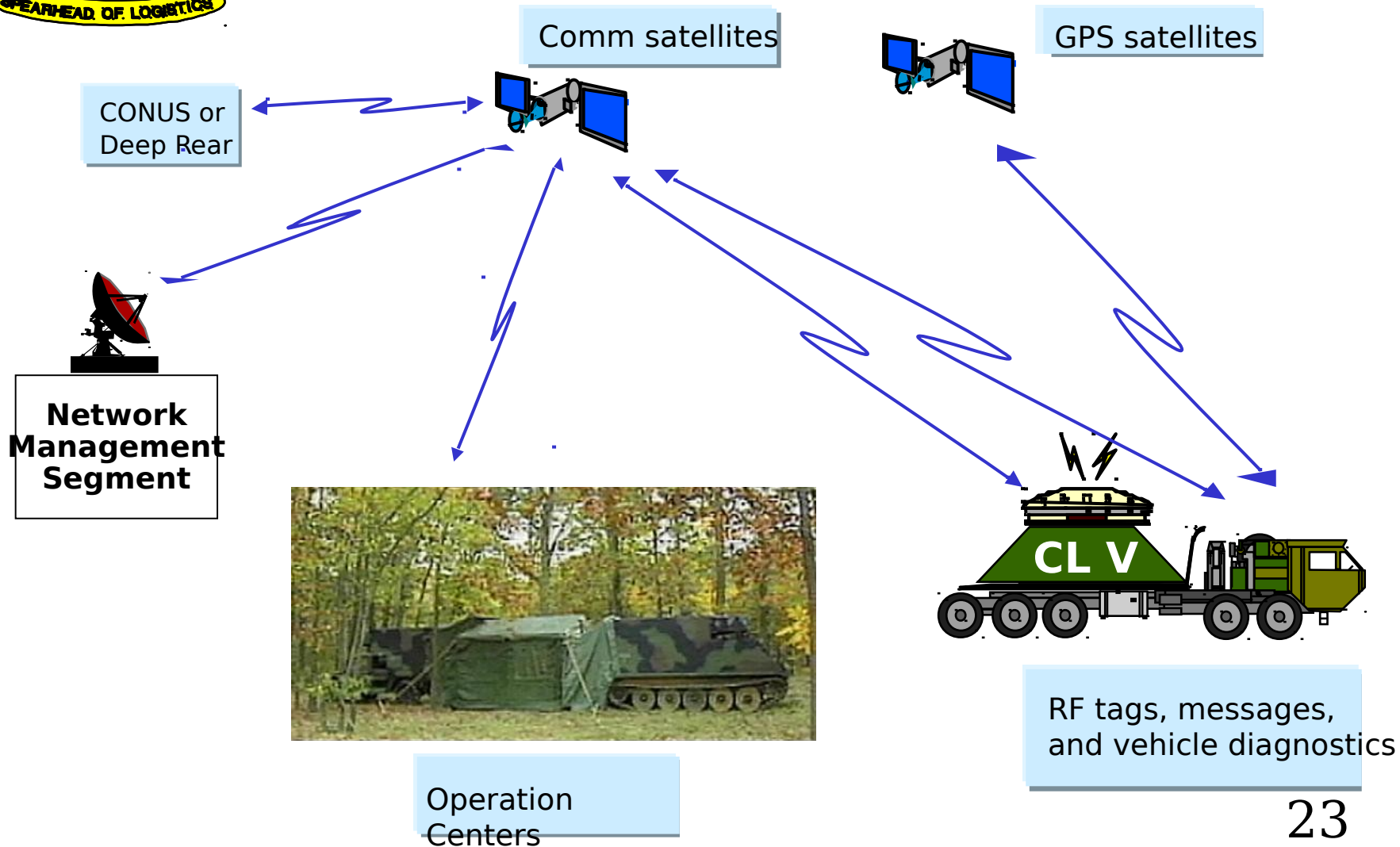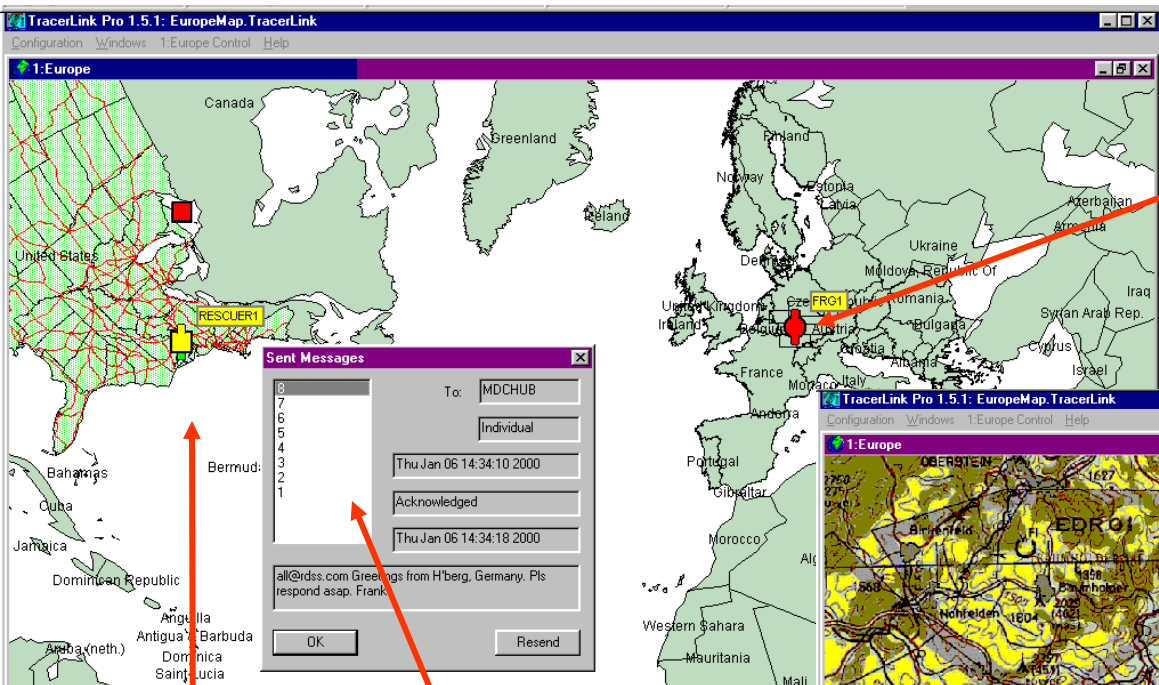
Communications Network

Comm
Satellites

GPS

Network
Management
Segment

Control station

V1 and V2

GPS Communication Concepts

Comm satellites

GPS satellites

CONUS or Deep Rear

Network Management Segment

CL V

RF tags, messages, and vehicle diagnostics

Operation Centers

23

Easy-to-use Mapping

Zoomable, panable, savable

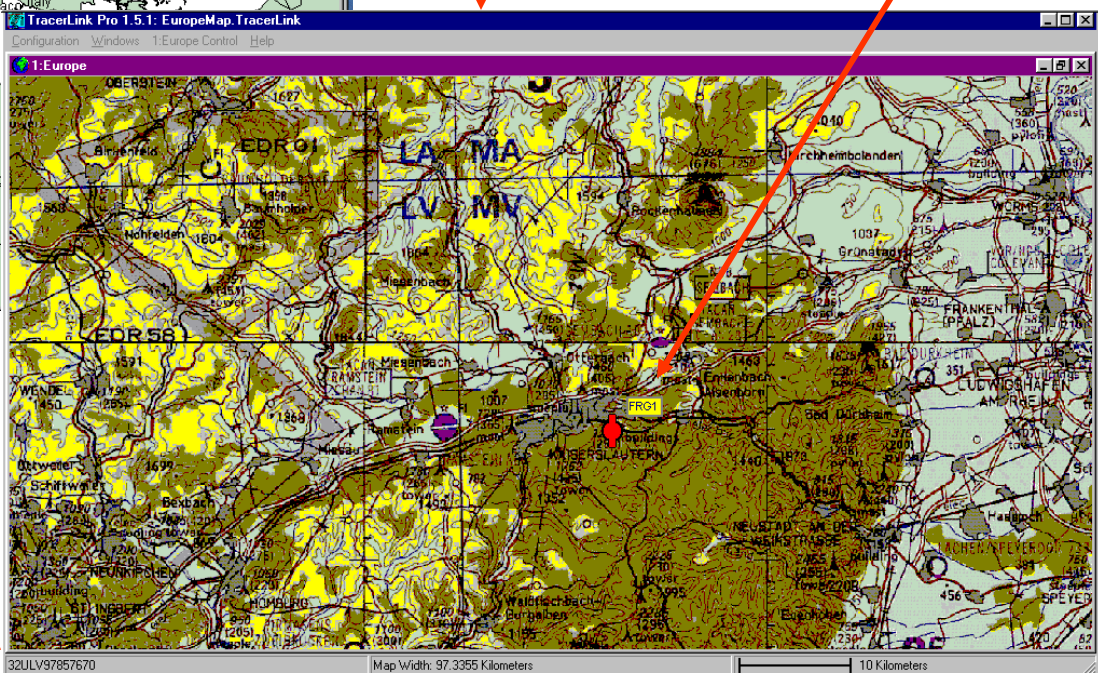Shape and color of symbol indicate type of unit and status

Background map with:
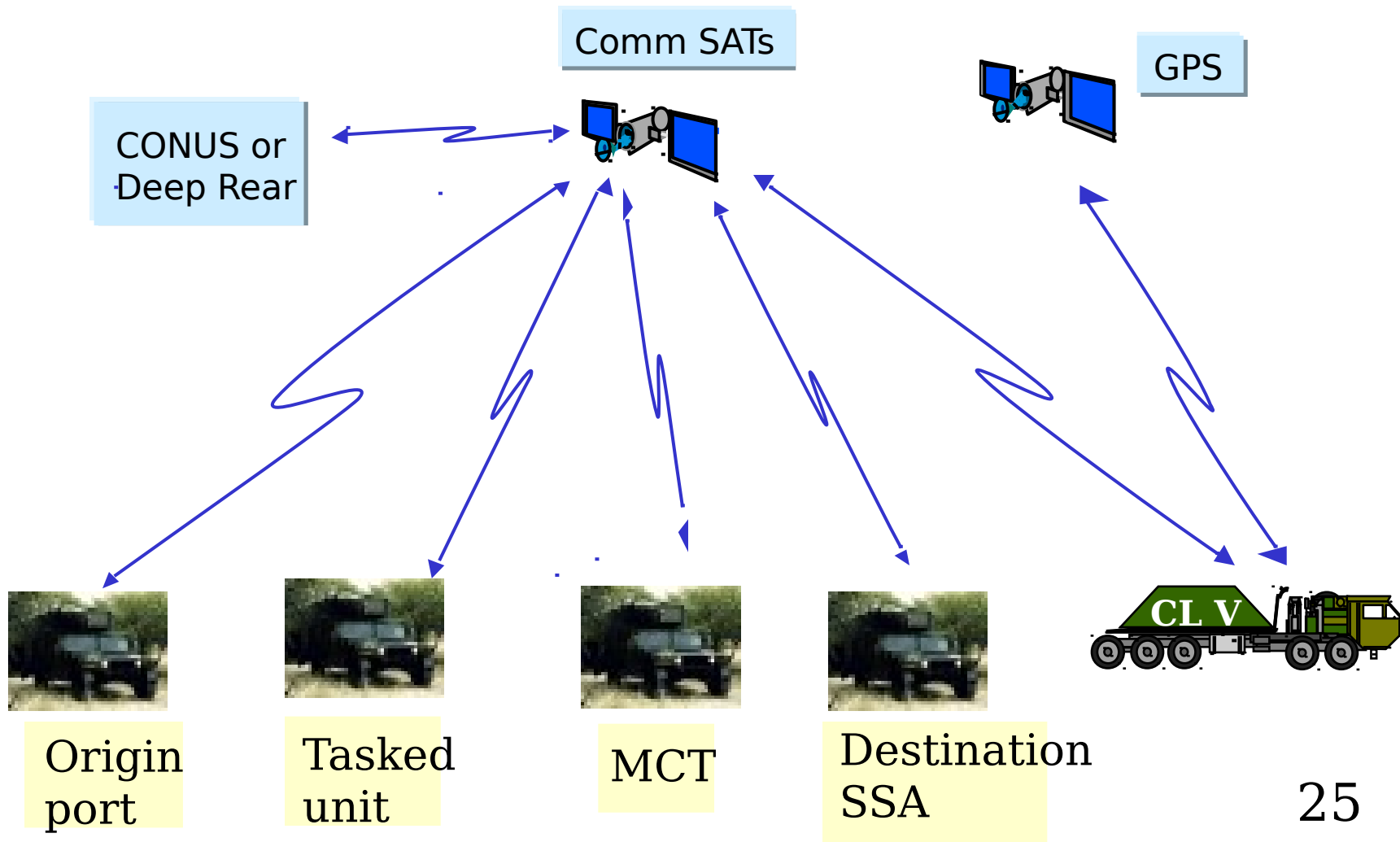- country boundaries,
- major cities,
- major highways

MTS Messenger and TracerLink work simultaneously

Military grid or Lat Long coordinate

Who receives the transmissions?

Comm SATs

GPS

CONUS or Deep Rear

Origin port

Tasked unit

MCT

Destination SSA

CL V

Where found?

MTS-Control Sta
Operations
SSAs
Movement Control

HMMWV
Commanders/Plat Ldrs
Operations
Chaplains
Movement Control Teams
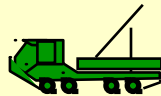
PLS
Supporting Battlefield
Distribution

Tractor/Trailer Rigs
Supporting Battlefield
Distribution

HEMTT & MTV Cargo
Supporting Battlefield
Distribution

HETs
Unit moves
Recovery

HEMTT & MTV Wrecker
Area Support Maintenance
Unit Recovery

HEMTT & MTV Fueler
Unit Fuelers

HMMWV Ambulance
At Corps and above

26

Vehicles Approved for MTS

HEMMT, PLS, HET, FMTV, and HMMWV

Summary

Movement Tracking System

SPEARHEAD OF LOGISTICS